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09/396,873	09/15/1999	BRUCE DICKSON	5577-175	8033
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MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			BROWN, CHRISTOPHER J	
			ART UNIT	PAPER NUMBER
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/396,873  
Filing Date: September 15, 1999  
Appellant(s): DICKSON ET AL.

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For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 7/21/2004.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

No amendment after final has been received. Applicant indicates one was filed 4/27/2004; no such amendment is in the record. Since this amendment is filed after the final office action, it is not entered.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

The appellant's statement in the brief that certain claims do not stand or fall together is not agreed with because the appellant does not argue for individual claims within the groups of claims.

Group 1 consists of claims 1-7, 9-12, 23-28, and 30-32.

Group 2 consists of claims 1, 14, 15, 19, 20, 21, 23, 33, 34, and 39.

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Group 3 consists of claims 1, 14, 15, 16, 22, 23, 34, 35, and 36.

Group 4 consists of claims 1, 14, 15, 17, 23, 34, 36, and 37.

Group 5 consists of claim 8.

Group 6 consists of claim 13 and 29.

Group 7 consists of claim 21.

**(8) *Claims Appealed***

The copy of the appealed claims contained in Appendix A to the brief is correct.

**(9) *Prior Art of Record***

5,828,034	CHANG	1-1997
5,075,606	LIPMAN	8-1990
4,052,720	MCGREGOR	3-1976
4,727,655	JACOBI JR.	2-1987

**(10) *Grounds of Rejection***

A new ground(s) of rejection is made in view of the applicant's arguments. The new grounds of rejection are based upon previously cited references, the new grounds of rejection are made to clarify the examiners previous rejection. Claim 29, which is analogous to claim 13 has been added to group 6 in the interest of completeness. The examiner has added a figure of a computer with an office from US 5,611,608 to solidify that it is well known that offices contain computers and data entry devices. A similar picture could be obtained from other sources.

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*Claims 1, 14, 15-17, 22, 23, and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGregor US 4,052,720 in view of Clausen US 5,611,608.*

***Group I***

**Claims 1-7, 9-12, 23-28, 30-32, are rejected under 35 U.S.C. 102(e) as being anticipated by Chang US 5,828,034.**

***Group II***

**Claims 1,14,15,19,20,21,23,33,34,39 are rejected under 35 U.S.C. 102(e) as being anticipated by, Lipman US 5,075,606.**

***Group III***

Rejection of Group III has been withdrawn.

***Group IV***

**Claims 1, 14, 15-17, 22, 23, and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGregor US 4,052,720 in view of Clausen US 5,611,608.**

***Group V***

**Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang US 5,828,034**

***Group VI***

**Claims 6, 13, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang US 5,828,034 in view of Jacobi Jr. US 4,727,655.**

***Group VII***

**Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang US 5,828,034 in view of Lipman US 5,075,606**

***(11) Response to Argument***

**Claims 1-7, 9-12, 23-28, 30-32, are rejected under 35 U.S.C. 102(e) as being anticipated by Chang US 5,828,034.**

**Group I**

*As per Group I; Claims 1-7, 9-12, 23-28, and 30-32, Chang US 5,828,034 anticipates each claim.*

Applicant argues that Chang does not disclose a device that masks user input.

Claims 1 and 23 state “ a data entry device, and means for establishing the external temperature of the data entry device to reduce temperature differentials.... To reduce the detectability of a thermal signature by eavesdropping”

Although the applicant's intent for his heating element may differ from Chang's intent for his heating element, the applicant does not claim eavesdropping or a feedback control based on detectability of thermal imprints. The preferred embodiment simply provides resistive heating of a keyboard or other input device, as the means for masking (Instant specification, Page 9, lines 11-25). Chang US 5,828,034 describes the same physical structure with the same function (controlled heating) so it anticipates this limitation.

Chang teaches a data entry device (keyboard, Col 1 lines 55-57). Chang teaches warming the keyboard and hands, (Col 1 lines 57-64). Warming the keyboard from room temperature reduces temperature differentials, thereby masking thermal signatures as a result of data entry by a user of the data entry device. This reduces the detectability of the signature by eavesdropping.

Claims 2 and 25 state, "controlling the external temperature of the data entry device to reduce temperature differentials left in the data entry device"

Chang teaches a keyboard which is heated, which reduces the temperature differential left by a person's hand, which may be warmer than a room temperature keyboard, (Col 1 lines 57-64). Chang teaches controlling the temperature in a range surrounding a predetermined set point by monitoring the temperature and controlling the heating element to provide said temperature, (Col 6 lines 5-15). By setting the heating element to a set point close to the users temperature, the temperature differentials are reduced.

Claims 3 and 24 state “data entry device is a keyboard”

Chang teaches a data entry keyboard, (Col 3 line 17).

Claims 4 states “data entry device has external surfaces that are thermally conductive”

Chang teaches the data entry device surface is thermally conductive (joystick), (Col 5 lines 7-10).

Claim 5 states “data entry device is thermally resistive”

Chang teaches a data entry device has external surfaces that are thermally resistive, (plastic), (Col 3 line 18).

Claims 6 and 26 state, “maintaining the external temperature in a range surrounding a predetermined set point”

Chang teaches controlling the temperature in a range surrounding a predetermined set point by monitoring the temperature and controlling the heating element to provide said temperature around said set point (Col 6 lines 9-21).

Claim 7 further states “monitoring the external temperature to provide device temperature and adjusting the output of the temperature control mechanism responsive to the device temperature so as to maintain the device temperature at approximately the setpoint”

Chang teaches monitoring the temperature of the device and adjusting the temperature accordingly, to maintain a set temperature, (Col 6 lines 14-21).

Claim 9 states “controlling step comprises the step of controlling the external temperature using conduction”

Chang teaches using conduction to maintain the external temperature of the data entry device, (Col 5 lines 6-12).

Claims 10, and 30 state “controlling the external temperature utilizing convection”

Chang teaches controlling the temperature using convection, (fan), (Col 3 line 55).

Chang teaches using convection to maintain the external temperature of the data entry device, (Col 3 line 60 to Col 4 line 13).

Claims 11, and 31 state “controlling the external temperature utilizing convection comprises blowing a stream of temperature controlled air in proximity to the data entry device”

Chang discloses controlling the temperature by blowing a stream of temperature controlled air near the data entry device, (fan), (Col 3 lines 55-60).

Claims 12 and 28, state, “controlling step comprises the step of controlling the external temperature utilizing radiation”

Applicant argues that Chang is not teaching heating via radiation. Examiner disagrees, Chang teaches controlling the temperature through radiation for the data entry device, (Col 1 line 60, Col 3 line 32, and Col 5 lines 24-27).

Claim 26 states “a resistive heating source operably associated with the data entry device so as to maintain the external temperature in a range surrounding a predetermined setpoint”

Chang teaches the heat source may be a resistive heating element, (Col 5 lines 58-65).

Claim 27 states, “the resistive heat source comprises a heating element formed as part of the data entry device”

Chang teaches the step of controlling the external temperature using a resistive heating element as part of the data entry device, (Col 3 line 27, Col 5 lines 55-60).

Claim 32 states “masking comprises a feedback control circuit which provides a closed loop feedback control of the temperature wherein the feedback control circuit comprises: a temperature sensor operably associated with the temperature sensor and with the means for controlling the temperature so as to control the means for establishing the external temperature of the data entry device, and

A control circuit associated with the temperature sensor and with means for controlling temperature so as to control the means for establishing the external temperatures of the data entry device based on the sensed temperature”

Chang teaches that masking comprises a control circuit comprising a temperature sensor associated with the data entry device, said control circuit controls the means for establishing the external temperature based on the sensed temperature, (Col 6 lines 14-22).

## **Group II**

**Claims 1,14,15,19,20,21,23,33,34,39 are rejected under 35 U.S.C. 102(e) as being anticipated by, Lipman US 5,075,606.**

*As per Group 2; Claims 1,14,15,19,20,21,23,33,34,39, Lipman US 5,075,606 anticipates each claim.*

Although the applicant's intent to use a blower to mask auditory data entry sounds may differ from Lipman's intent for his computer fan, the applicant does not claim eavesdropping, or complete masking of data entry sounds. The preferred embodiment simply provides sound waves as the means for masking. Lipman US 5,075,606 describes a physical structure with the same function in proximity to the data entry device (noisy fan) so it anticipates this limitation.

As per claims 1, and 23, Lipman masks a signature of data entry by utilizing a computer fan, (Col 2 line 24). Lipman's computer fan at least partially masks data entry sounds by generating its own sound waves.

As per claims 14 and 33, Lipman discloses a method to mask sound wave signature (noisy fan), (Col 2 line 24). Lipman's fan emits sound waves that at least partially mask the sound waves emitted by data entry.

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As per claims 15, and 34, Lipman discloses a method to mask sound wave signature (noisy fan), (Col 2 line 24). Lipman's fan generates noise to the effect of interfering in the detectability of the sound waves created by data entry.

As per claims 19, 20, and 39 Lipman discloses that a CPU fan may provide background noise, (fan is noisy), (Col 2 line 24). Lipman's fan may be considered a "blower" and when part of a computer, is in proximity to the data entry device.

### **Group III**

Group III rejection is withdrawn.

### **Group IV**

**Claims 1, 14, 15-17, 22, 23, and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGregor US 4,052,720 in view of Clausen US 5,611,608.**

*As per Group 4; Claims 1,14,15,17,23,34,36,37 McGregor US 4,052,720 is obvious over each claim.*

The applicant's intent is to use music and interfering sound patterns to mask auditory data entry sounds, the applicant does not claim eavesdropping, or complete masking of data entry sounds. The preferred embodiment provides interfering sound patterns and music as the means for masking. McGregor US 4,052,720 describes a sound control system

with the same function as the applicant's invention, so it anticipates the limitations of the instant specification.

As per claims 1, 14, 15, 17, 23, 34, 36, and 37, McGregor teaches producing random masking noise, (Col 3 lines 20-25). McGregor teaches masking with pre-recorded sounds (Music), (Col 3 lines 50-60). McGregor teaches adapting the amplitude and frequency of the noise to best adapt the masking, (Col 4 lines 17-31). McGregor teaches the system is designed for use in a room, and in an office (Col 4 lines 3 lines 15-20, Col 6 line 65 to Col 7 line 6).

McGregor does not teach a computer in an office.

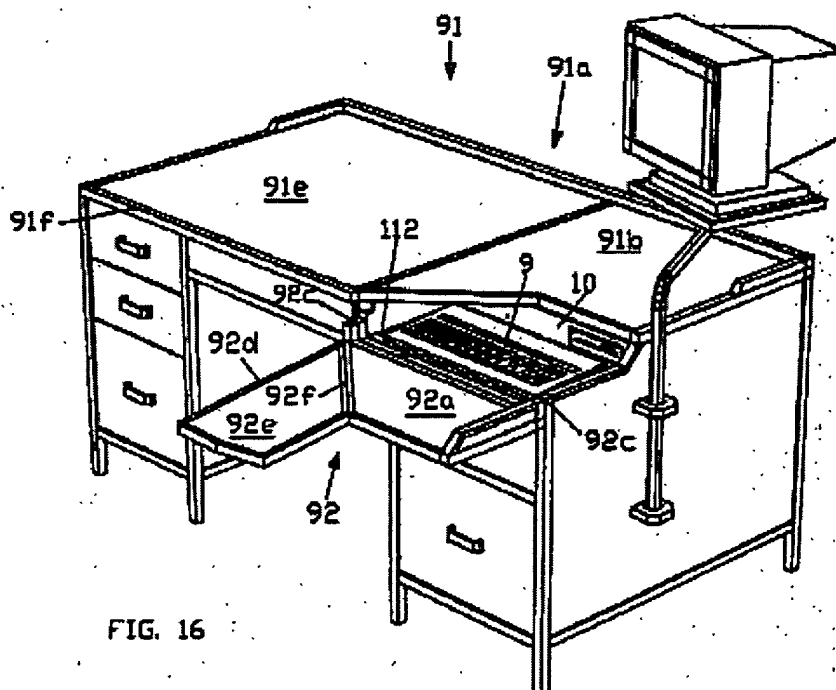
Clausen teaches an office desk designed for use with computers, (Fig 11, 15, 16) It is well known that offices have computers, and computers have data entry devices. It would have been obvious to one of ordinary skill in the art to modify the system of McGregor in an office with the computer desk and computers of Clausen to maximize productivity and ergonomic value, (Col 2 lines 61-66).

**United States Patent** [19]  
**Clausen**

[11] **Patent Number:** 5,611,608  
[45] **Date of Patent:** Mar. 18, 1997

[54] **COMPUTER-OFFICE DESK**

*Primary Examiner—Brian K. Green*



### Group V

Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang US 5,828,034

*As per Group 5; Claim 8 is unpatentable over of Chang US 5,828,034*

As per claim 8, Chang discloses a range of temperatures from room temperature 21C (70F) to 49C (120F), (Col 3 line 46). It would have been obvious to pick a temperature in the middle of this range for user comfort, (Col 1 line 47). Any temperature picked for comfort would be closer to human body temperature than room temperature, and mask the thermal signature left by a user on a data entry device.

### **Group VI**

**Claims 6, 13, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang US 5,828,034 in view of Jacobi Jr. US 4,727,655.**

*As per Group 6; Claims 13, and 29 unpatentable over Chang US 5,828,034 in view of Jacobi Jr. US 4,727,655.*

Although the applicant's intent for his heating element may differ from Chang's intent for his heating element, the applicant does not claim eavesdropping or a feedback control based on detectability of thermal imprints. The preferred embodiment simply provides resistive heating of a keyboard or other input device, as the means for masking (Instant specification, Page 9, lines 11-25). Chang US 5,828,034 describes the same physical structure with the same function (controlled heating) so it anticipates this limitation.

As per claim 13, Chang discloses heating the data entry device. Chang does not disclose using an infrared heat lamp.

Jacobi discloses an infrared heat lamp for heating, (Col 1 line 55, Col 5 line 3).

It would have been obvious to one skilled in the art to replace Chang's heating element, with Jacobi's heat lamp, because the lamp is economical and efficient, (Col 2 line 39).

### **Group VII**

**Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang US 5,828,034 in view of Lipman US 5,075,606**

*As per Group 7; Claim 21 is unpatentable over Chang US 5,828,034 in view of, Lipman US 5,075,606.*

Although the applicant's intent to use a blower to mask auditory data entry sounds may differ from Lipman's intent for his computer fan, the applicant does not claim eavesdropping, or complete masking of data entry sounds. The preferred embodiment simply provides sound waves as the means for masking. Lipman US 5,075,606 describes a physical structure with the same function in proximity to the data entry device (noisy fan) so it anticipates this limitation.

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As per claim 21, Chang teaches that a blower, (fan), may blow temperature controlled air on a data entry device controlling the external temperature to reduce temperature differentials by the user (Col 3 lines 55-60). Chang teaches possible sources of heated air are PC components which may circulate air via a PC fan, (Col 4 lines 4-13). Chang does not disclose a fan is noisy.

Lipman teaches a fan masks sound waves, (noisy fan), (Col 2 line 24).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Christopher J. Brown

March 30, 2005

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